

Listing and Amendments to the Claims

This listing of claims will replace the claims that were published in the PCT
Application:

1. (Currently amended) An apparatus (~~100~~), comprising a receive chain and a transmitting chain, which receives signal and transmits signal during separate time intervals ~~characterized in that wherein~~ it further comprises:
power amplifying means (~~56~~) for amplifying a transmission signal; and
control means (~~30~~) for controlling said power amplifying means based on a power level estimation of third order intermodulation products associated with said power amplifying means (~~56~~), said intermodulation products being represented by leakage signals going through switch to signal receiving elements during the transmitting mode.
2. (Currently amended) The apparatus (~~100~~) of claim 1, wherein said control means (~~30~~) controls a bias current associated with said power amplifying means (~~56~~).
3. (Currently amended) The apparatus (~~100~~) of claim 1, further comprising signal transmitting means (~~10~~) for wirelessly transmitting said transmission signal.
4. (Currently amended) The apparatus (~~100~~) of claim 3, further comprising:
switching means (~~12~~) for providing passage of said transmission signal from said power amplifying means (~~56~~) to said signal transmitting means; and
wherein a leakage signal associated with said switching means (~~12~~) includes said third order intermodulation products.

5. (Currently amended) The apparatus ~~(100)~~ of claim 1, wherein:
said transceiver apparatus ~~(100)~~ includes a transmitting mode and a receiving mode; and
said control means ~~(30)~~ comprises digital filtering means for performing digital filtering operations during both said transmitting mode and said receiving mode.
6. (Currently amended) The apparatus ~~(100)~~ of claim 5, wherein said digital filtering means ~~(32)~~ performs a high pass digital filtering operation during said transmitting mode, and performs a low pass digital filtering operation during said receiving mode.
7. (Currently amended) The apparatus ~~(100)~~ of claim 1, wherein said control means ~~(30)~~ controls said power amplifying means ~~(56)~~ only if a transmitting power level of said transceiver apparatus ~~(100)~~ exceeds a predetermined threshold level.
8. (Currently amended) The apparatus ~~(100)~~ of claim 7, ~~characterized in that wherein~~ the bias current is maintained at its current level only said transmitting power level of said transceiver apparatus ~~(100)~~ does not exceed said predetermined threshold level.
9. (Currently amended) A method ~~(900)~~ for controlling a transceiver apparatus ~~(100)~~, comprising:
detecting a power level of third order intermodulation products associated with a power amplifier ~~(56)~~ of said transceiver apparatus ~~(950)~~; and
controlling said power amplifier responsive to said detection ~~(960,970)~~.
10. (Currently amended) The method ~~(900)~~ of claim 9, wherein said controlling step includes controlling a bias current associated with said power amplifier ~~(56)~~.

11. (Currently amended) The method of ~~any of claims 9 or 10,~~
~~characterized in that claim 9, wherein~~ the bias current is reduced if an accumulator
level is lower than a reference level and in that the bias current is increased if said
accumulator level is higher than said reference level, said accumulator level being an
estimate of power level of third order intermodulation products.

12. (Currently amended) The method of ~~any of claims 9 to 11,~~
~~characterized in that claim 9, wherein~~ the bias current is modified only if a
transmitting power level of said transceiver apparatus ~~(100)~~ exceeds a predetermined
threshold level.

13. (Currently amended) The method of ~~any of claims 9 to 12,~~
~~characterized in that claim 9 wherein~~ that the bias current is maintained at its current
level only if said transmitting power level of said transceiver apparatus ~~(100)~~ does not
exceed said predetermined threshold level.

14. (Currently amended) The method ~~(900)~~ of ~~any of claims 9 to 13 claim~~
~~9,~~ further comprised of:
using said power amplifier ~~(56)~~ to amplify a transmission signal; and
using a switch ~~(12)~~ to provide passage of said transmission signal
from said power amplifier to a signal transmitting element ~~(10)~~.

15. (Currently amended) The method ~~(900)~~ of ~~any of claims 9 to 14 claim~~
~~9,~~ further comprised of using said signal transmitting element ~~(10)~~ to wirelessly
transmit said transmission signal.

16. (Currently amended) The method ~~(900)~~ of claim 14, wherein a
leakage signal associated with said switch ~~(12)~~ includes said third order
intermodulation products.

17. (Currently amended) The method ~~(900)~~ of claim 9, wherein said
detecting and controlling steps ~~(950-970)~~ are performed if a transmitting power level
of said transceiver apparatus exceeds a predetermined threshold level ~~(910)~~.

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18. (Currently amended) The apparatus (~~100~~) of claim 1 ~~to~~ 7, wherein control means are set up using a single component such as a controller.

19. (Currently amended) The apparatus (~~100~~) of claim 1 ~~to~~ 7, wherein switching means are set up using a single component such as a switch.